

November 10, 2014

**MEMORANDUM**

**SUBJECT:** Clean Air Act Method 9 Opacity Observations, Duke Energy, W. H. Zimmer  
Generation Station (Facility ID: 14-13-09-0154), Moscow, Ohio

**FROM:** Mark Conti, Environmental Engineer

**THRU:** Brooke Furio, Section Chief (ME-W)

**TO:** Air Enforcement & Compliance Assurance Section (AE-17J)

**ATTN:** Brian Dickens, Chief

On October 29, 2014, I recorded off-site Method 9 opacity observations of Duke Energy, W. H. Zimmer Generating Station boiler B006. The six-minute average opacity ranged from 51.9 – 59.0%. I have attached the observation form, a data summary table, and a photograph of the source taken from the observation point.

Attachments (4)

ec: Ethan Chatfield

# EPA METHOD 9 (40 CFR 60 - Appendix A)

## VISIBLE EMISSION OBSERVATION FORM

COMPANY NAME  
**Duke Energy - Wm. H. Zimmer**

LOCATION  
**station**

LOCATION  
**1781 U.S. Route 52**

CITY **SCOW** STATE **OH** ZIP **45153**

PROCESS EQUIPMENT **(B006) coal-fired boiler** OPERATING MODE **—**

CONTROL EQUIPMENT **ESP + FGD** OPERATING MODE **—**

DESCRIBE EMISSION POINT  
**round stack - read downwind after water diss.**

HEIGHT OF EMISSION POINT  
**1000 ft. est.**

HEIGHT OF EMISSION POINT RELATIVE TO OBSERVER  
**1000' est. →**

DISTANCE TO EMISSION POINT  
**2800 ft. est. →**

DIRECTION TO EMISSION PT. (DEGREES (0-360))  
**START 360° END 360°**

VERTICAL ANGLE TO OBSERVATION POINT  
**START 20° END 20°**

DIRECTION TO OBSERVATION POINT (DEGREES (0-360))  
**START 360° END 360°**

DISTANCE & DIRECTION TO OBSERVATION POINT FROM EMISSION POINT  
**START 2800 ft. South END 2800' S →**

DESCRIBE EMISSIONS  
**attached steam lifting plume, →**

EMISSION COLOR  
**white**

WATER DROPLET PLUME  
**START white END white**

DESCRIBE PLUME BACKGROUND  
**START blue sky END blue sky**

BACKGROUND COLOR  
**START blue END blue**

SKY CONDITIONS  
**START sunny/clear END sunny/clear**

WIND SPEED (MPH)  
**10-15**

WIND DIRECTION  
**START W END WNW**

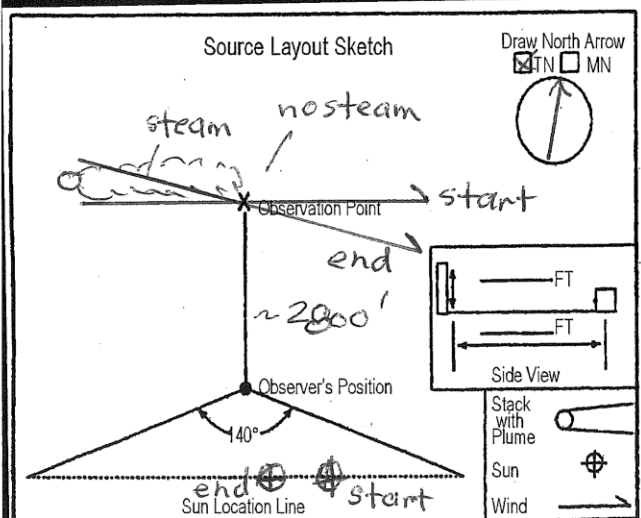
AMBIENT TEMP  
**START 60 F END 60 F**

WET BULB TEMP  
**—**

RH percent  
**~40%**

OBSERVATION DATE **10-22-14** START TIME **12:25 pm** END TIME **12:40 pm**

MIN	SEC	0	15	30	45	COMMENTS
1		60	60	60	60	
2		60	65	50	40	
3		50	70	50	65	
4		65	75	65	35	
5		45	60	60	50	
6		60	50	65	45	
7		50	60	55	50	
8		35	60	30	40	
9		30	70	40	60	
10		50	60	60	60	
11		60	35	60	70	
12		40	70	55	60	
13		75	60	65	70	
14		60	45	50	70	
15		70	75	40	45	
16		65	70	50	55	
17		65	50	50	45	
18		60	35	40	30	
19						
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OBSERVER'S NAME (PRINT)  
**Mark Conti**

OBSERVER'S SIGNATURE  
**Mark Conti**

DATE  
**10-22-14**

ORGANIZATION  
**EPA R5/OECA/Cleveland Office**

CERTIFIED BY  
**Whitlow**

DATE  
**10-22-14**

ADDITIONAL INFORMATION  
**off-site observations, Plume read ~800' downwind of stack.**

### Visible Emission Summary

Duke Energy, W. H. Zimmer Generating Station

Source: B006 stack

Observation Date: 10/29/2014

Time: 12:22 - 12:40 p.m.

Minute	Second				6-Minute Rolling Average
	0	15	30	40	
1	60	60	60	60	
2	60	65	50	40	
3	50	70	50	65	
4	65	75	65	35	
5	45	60	60	50	
6	60	50	65	45	56.9
7	50	60	55	50	55.8
8	35	60	30	40	53.8
9	30	70	40	60	52.3
10	50	60	60	60	51.9
11	60	35	60	70	52.3
12	40	70	55	60	52.5
13	75	60	65	70	54.8
14	60	45	50	70	57.3
15	70	75	40	45	58.5
16	65	70	50	55	59.0
17	65	50	50	45	58.3
18	60	35	40	30	55.8



**PHOTOGRAPH:** 1 of 1

**FACILITY/SITE NAME:** Duke Energy, W. H. Zimmer Generating Station

**CITY, STATE:** Moscow, Ohio

**DATE:** October 29, 2014

**TIME:** 12:18 p.m.

**CAMERA, FILM:** Canon PowerShot SD1400 IS (S/N 212065043418)

**PHOTOGRAPHER:** Mark Conti

**USEPA OFFICE:** OECA, Cleveland Office

**DESCRIPTION:** This is a view looking north toward the plume from boiler B006 stack. The photograph was taken from the Method 9 observer's position a few minutes before recording observations.

## FY 2015 MANUAL INSPECTION CONCLUSION DATA (ICDS) FORM

(Instructions and definitions for completing the information follow)

1. **Region:** 5      **Facility Name/Location:** Duke Energy, W. H. Zimmer Generating Station  
1781 U.S. Route 52  
Moscow, Ohio 45153
2. **General Facility Permit ID or Media-Specific Permit ID number (e.g. NPDES permit #):**  
14-13-09-0154 (Title V permit)
3. **SIC (4-digit):** \_\_\_\_\_ **or** **NAICS Code:** 221112
4. **Date of Inspection:** 10/29/2014 (mm/dd/yyyy)
5. **Media Type** (check one only)  
☒ CAA-Stationary   ☐ CWA-NPDES   ☐ GLP   ☐ TSCA Lead Paint   ☐ CAA-Mobile Source  
☐ CAA-112(r)   ☐ RCRA Hazardous Waste   ☐ UST   ☐ TSCA core, PCBs, asbestos  
☐ CWA-Pretreatment (IU)   ☐ CWA 311 SPCC   ☐ CWA 404 Wetland   ☐ EPCRA 313  
☐ EPCRA non-313   ☐ FIFRA
6. **Deficiencies:** Did you observe deficiencies during inspection? ☒ Yes   ☐ No [N/A is not allowed]  
a. If YES, go to #7  
b. If NO, go to #9
7. **If YES:** Did you communicate the deficiencies to the facility during the inspection?   ☐ Yes   ☒ No
8. **Actions Taken:** Did you observe the facility take any actions during the inspection to address the deficiencies communicated?   ☐ Yes   ☒ No [N/A is not allowed]  
a. If NO, go to #9  
b. If YES, check the action(s) taken, or describe any other actions taken. (Check all that apply)

### Action(s) Taken

- \_\_\_\_\_ Verified compliance with previously issued enforcement action – part of all conditions
- \_\_\_\_\_ Corrected recordkeeping deficiencies
- \_\_\_\_\_ Corrected monitoring deficiencies
- \_\_\_\_\_ Completed a notification or a report
- \_\_\_\_\_ Requested a permit application
- \_\_\_\_\_ Implemented new or improved management practices or processes
- \_\_\_\_\_ Improved pollutant identification (e.g. labeling, manifesting, storage, etc.)
- \_\_\_\_\_ Reduced pollution (e.g. use reduction, industrial process change, emissions or discharge change etc.) *Specify the pollutant(s) reduced only if this action is checked.*

**Water:**   ☐ Ammonia   ☐ BOD   ☐ COD   ☐ TSS   ☐ O/G   ☐ TC   ☐ DO   ☐ Metals   ☐ CN

**Air:**   ☐ NO<sub>x</sub>   ☐ SO<sub>2</sub>   ☐ PM   ☐ VOC   ☐ Metals   ☐ HAPs   ☐ CO

**List other observed or other pollutants reduced:** \_\_\_\_\_

9. **Assistance:**      Did you provide *general* assistance based on national policy?   ☐ Yes   ☒ No  
                                 Did you provide *site-specific* assistance based on national policy?   ☐ Yes   ☒ No  
Note: EPA inspectors are **not** required to provide compliance assistance.

**Optional Information:** Describe actions taken or assistance provided to assist facility.  
Did not contact facility. Observations made from an off-site location.

## NOTE TO EPA INSPECTORS

- The main purpose of EPA inspections/evaluations is to determine compliance with environmental regulations and enforcement agreements. Secondary purposes include providing a field presence to create a credible deterrent and providing assistance, when appropriate, to help facilities achieve compliance.
- The ICDS is used to identify observable corrections to deficiencies and compliance assistance activities. ICDS is **NOT** designed to capture all of the observations, findings, and other data contained in the final inspection report. Deficiencies identified as potential violations, and actions to address deficiencies noted on the ICDS must be included in the final EPA inspection report.
- ICDS information will be used to collect accomplishments of EPA's national inspection efforts, develop inspection outcomes for GPRA, and manage national compliance monitoring resources.
- The information will **NOT** be used to track individual EPA inspectors' performance.
- The ICDS should only be used for EPA-led inspections, not for state oversight inspections.

## Instructions for Each Question

1. Region, Facility Name/Location: Enter the Region, and facility name/location (for unpermitted facilities).
2. Permit ID#: Enter either the Facility Registration System (FRS) permit ID or media-specific ID # (e.g., NPDES, CAA, or RCRA permit number).
3. SIC/NAICS Codes: Identify the SIC or NAICS code at (<http://www.commerce.gov>), (<http://www.osha.gov/oshstats/sicser.html>), (<http://www.census.gov/epcd/www/naics.html>), by CD-ROM (PB98-502024- NTIS (800-553-6847), or OC Inspector Website (<http://intranet.epa.gov/oeca/inspector>)
4. Date of Inspection: Enter the beginning date of the inspection (e.g., 04/10/2004)
5. Media Type: Check the environmental media program inspection being conducted.
6. Deficiencies: Check YES or NO. EPA inspectors should follow the regional policy on when and how to inform facilities of deficiencies. Deficiencies are defined as potential violations. Deficiencies are **NOT** compliance determinations (further review is needed to determine violations). A list of potential deficiencies is on the ICIS compliance monitoring screen (<https://caribou.rtpnc.epa.gov/ICIS/>).
7. Communication: Check YES or NO. N/A is not allowed.
8. Actions Taken: Check YES or NO. If YES, check only action(s) actually observed/seen, or write in a short description of the action in the "Other" section. These are **NOT** compliance determinations. Check the box to specify the pollutant: *Ammonia (NH<sub>3</sub>-N)* – ammonia nitrogen, ammonia as N, *BOD* – Biochemical Oxygen Demand, *COD* – Chemical Oxygen Demand, *TC* – Total Coliform, *TSS* – Total Suspended Solids, *SS* – Settleable Solids, *O/G* – Oil and Grease, *DO* – Dissolved Oxygen, *NO<sub>x</sub>* – Nitrogen Oxides, *SO<sub>2</sub>* – Sulfur Dioxide, *PM* – Particulate Matter, *VOC* – Volatile Organic Compound, *CN* – Cyanide, *HAPs* – Hazardous Air Pollutants, *CO* – Carbon Monoxide, *Metals* – Hexavalent Chromium, Lead, Mercury, etc. Write in other pollutants if not listed. The Case Conclusion Data Sheet Training Booklet [December 300] provides additional information on actions taken. The Training Booklet can be obtained by calling the Office of Compliance (202-564-6004).
9. Compliance Assistance: Inspectors are **not required** to provide compliance assistance during inspections. Check YES or NO to the two questions. General compliance assistance involves distributing prepared information on regulatory compliance, P2 or other written materials/websites. Refer to National Policy: Role of the EPA Inspector in Providing Compliance Assistance During Inspections, June 2003 for more information for examples of site-specific assistance. The policy is available on the EPA website ([www.epa.gov](http://www.epa.gov)), the Inspector Website (<http://intranet.epa.gov/oeca/inspector>), or calling (202-564-2300).

## Data Collection Process

- Inspectors must complete the ICDS **immediately** after the inspection is conducted.
- Inspector should forward completed forms to first-line supervisor/designated alternate within five (5) days after returning from either a single inspection, or a series of inspections.
- The first-line supervisor/designated alternate must review the ICDS for completeness and accuracy and compile the ICDS information by media program to report ICDS results using the consolidated manual reporting form. The consolidated manual reporting form will be sent to HQ for **mid-year 2014 & end-of-year 2014 reporting**.